

<!--StartFragment-->RESULT 1  
AAR92216  
ID AAR92216 standard; protein; 116 AA.  
XX  
AC AAR92216;  
XX  
DT 15-JUN-2007 (revised)  
DT 28-MAY-1996 (first entry)  
XX  
DE LL2 MAb VH region.  
XX  
KW Humanised antibody; monoclonal antibody; MAb; LL2; B-cell lymphoma;  
KW leukaemia; therapy; diagnosis; complementarity determining region; CDR;  
KW antibody engineering; BOND\_PC;  
KW chimeric anti-B cell lymphoma IgG2a heavy chain variable region;  
KW chimeric anti-B cell lymphoma IgG2a heavy chain variable region [Mus sp.].  
XX  
OS Mus musculus.  
XX  
FH Key Location/Qualifiers  
FT Region 31. .35  
FT /label= CDR1  
FT /note= "claim 9, page 44"  
FT Region 50. .66  
FT /label= CDR2  
FT /note= "claim 10, page 45"  
FT Region 99. .105  
FT /label= CDR3  
FT /note= "claim 11, page 45"  
XX  
PN WO9604925-A1.  
XX  
PD 22-FEB-1996.  
XX  
PF 11-AUG-1995; 95WO-US009641.  
XX  
PR 12-AUG-1994; 94US-00289576.  
XX  
PA (IMMU-) IMMUNOMEDICS INC.  
XX  
PI Leung S, Hansen H;  
XX  
DR WPI; 1996-139454/14.  
DR N-PSDB; AAT15802.  
DR PC:NCBI; gi998424.  
XX  
PT Chimeric and humanised LL2 antibodies - used to produce conjugates for  
PT the therapy and diagnosis of B-cell lymphoma(s) and leukaemia(s).  
XX  
PS Claim 5; Page 36-37; 70pp; English.  
XX  
CC The complementarity determining regions (CDRs) of mouse monoclonal  
CC antibody (MAb) LL2 VK (AAR92215) and VH (AAR92216) regions were  
CC recombinantly linked to the framework sequences of human VK and VH  
CC regions, respectively, to give humanised LL2 VK (AAR92217) and VH  
CC (AAR92218). These were subsequently linked, respectively, to human kappa  
CC and IgG1 constant regions. A humanised MAb was obtd. that retained the B-  
CC lymphoma and leukaemia cell targeting and internalisation characteristics  
CC of the parental LL2 MAb, and which exhibited a lowered HAMA reaction. It  
CC can be linked to e.g. a cytostatic agent for therapeutic appln  
CC

CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed  
CC information from BOND.  
XX  
SQ Sequence 116 AA;

Query Match 100.0%; Score 620; DB 2; Length 116;  
Best Local Similarity 100.0%; Pred. No. 2.1e-42;  
Matches 116; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QVQLQESGAELSKPGASVKMSCKASGYTFTSYWLHWIKQRPGQGLEWIGYINPRNDYTEY 60  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 1 QVQLQESGAELSKPGASVKMSCKASGYTFTSYWLHWIKQRPGQGLEWIGYINPRNDYTEY 60

Qy 61 NQNFKDKATLTADKSSSTAYMQLSSLTSEDSAVYYCARRDITTFYWGQGTTLVSS 116  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 61 NQNFKDKATLTADKSSSTAYMQLSSLTSEDSAVYYCARRDITTFYWGQGTTLVSS 116

<!--EndFragment-->

<!--StartFragment-->RESULT 2  
AAR92215  
ID AAR92215 standard; protein; 113 AA.  
XX  
AC AAR92215;  
XX  
DT 15-JUN-2007 (revised)  
DT 28-MAY-1996 (first entry)  
XX  
DE LL2 MAb VK region.  
XX  
KW Humanised antibody; monoclonal antibody; MAb; LL2; B-cell lymphoma;  
KW leukaemia; therapy; diagnosis; complementarity determining region; CDR;  
KW antibody engineering; BOND\_PC;  
KW chimeric anti-B cell lymphoma IgG2a kappa variable region; LL2 VK.  
XX  
OS Mus musculus.  
XX  
FH Key Location/Qualifiers  
FT Region 24. .40  
FT /label= CDR1  
FT /note= "claim 6, page 44"  
FT Region 56. .62  
FT /label= CDR2  
FT /note= "claim 7, page 44"  
FT Region 95. .103  
FT /label= CDR3  
FT /note= "claim 8, page 44"  
XX  
PN WO9604925-A1.  
XX  
PD 22-FEB-1996.  
XX  
PF 11-AUG-1995; 95WO-US009641.  
XX  
PR 12-AUG-1994; 94US-00289576.  
XX  
PA (IMMU-) IMMUNOMEDICS INC.  
XX  
PI Leung S, Hansen H;  
XX  
DR WPI; 1996-139454/14.  
DR N-PSDB; AAT15802.  
DR PC:NCBI; gi998422.  
XX  
PT Chimeric and humanised LL2 antibodies - used to produce conjugates for  
PT the therapy and diagnosis of B-cell lymphoma(s) and leukaemia(s).  
XX  
PS Claim 5; Page 35-36; 70pp; English.  
XX  
CC The complementarity determining regions (CDRs) of mouse monoclonal  
CC antibody (MAb) LL2 VK (AAR92215) and VH (AAR92216) regions were  
CC recombinantly linked to the framework sequences of human VK and VH  
CC regions, respectively, to give humanised LL2 VK (AAR92217) and VH  
CC (AAR92218). These were subsequently linked, respectively, to human kappa  
CC and IgG1 constant regions. A humanised MAb was obtd. that retained the B-  
CC lymphoma and leukaemia cell targeting and internalisation characteristics  
CC of the parental LL2 MAb, and which exhibited a lowered HAMA reaction. It  
CC can be linked to e.g. a cytostatic agent for therapeutic appln  
CC  
CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed

CC information from BOND.

XX

SQ Sequence 113 AA;

Query Match 100.0%; Score 589; DB 2; Length 113;  
Best Local Similarity 100.0%; Pred. No. 4.7e-40;  
Matches 112; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 DIQLTQSPSSLAVSAGENVTMSCKSSQSVLYSANHKNYLAWYQQKPGQSPKLLIYWASTR 60  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 1 DIQLTQSPSSLAVSAGENVTMSCKSSQSVLYSANHKNYLAWYQQKPGQSPKLLIYWASTR 60

Qy 61 ESGVPDRFTGSGSGTDFTLTISRVQVEDLAIYYCHQYLSSWTFGGGTKLEIK 112  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 61 ESGVPDRFTGSGSGTDFTLTISRVQVEDLAIYYCHQYLSSWTFGGGTKLEIK 112

<!--EndFragment-->

<!--StartFragment-->RESULT 8  
AAW66099  
ID AAW66099 standard; protein; 123 AA.  
XX  
AC AAW66099;  
XX  
DT 10-DEC-1998 (first entry)  
XX  
DE anti-CD22 monoclonal antibody heavy chain variable region.  
XX  
KW anti-CD22 monoclonal antibody heavy chain variable region; VL;  
KW Pseudomonas exotoxin; variable heavy chain; VH; variable light chain;  
KW malignant B-cell; immunodiagnosis; RFB4 IgG.  
XX  
OS Mammalia.  
XX  
FH Key Location/Qualifiers  
FT Misc-difference 121  
FT /note= "Encoded by gtc"  
XX  
PN WO9841641-A1.  
XX  
PD 24-SEP-1998.  
XX  
PF 19-MAR-1998; 98WO-US005453.  
XX  
PR 20-MAR-1997; 97US-0041437P.  
XX  
PA (USSH ) US DEPT HEALTH & HUMAN SERVICES.  
XX  
PI Fitzgerald D, Pastan I, Mansfield E, Kreitman R;  
XX  
DR WPI; 1998-521227/44.  
DR N-PSDB; AAV07642.  
XX  
PT Recombinant anti-CD22 antibodies and immuno-conjugates - of antibodies  
PT linked to a therapeutic agent, e.g. Pseudomonas exotoxin or a label; for  
PT inhibiting malignant B-cells.  
XX  
PS Claim 6; Fig 1; 71pp; English.  
XX  
CC The invention claims for a recombinant immunoconjugate comprising of a  
CC therapeutic agent (e.g Pseudomonas exotoxin) or a detectable label  
CC peptide bonded to a recombinant anti-CD22 antibody (RFB4 IgG) having the  
CC present variable heavy (VH) chain with a cysteine residue at amino acid  
CC 44 and a variable light (VL; AAW66098) chain with a cysteine residue at  
CC amino acid 100. The immunoconjugate is claimed to inhibit the growth of  
CC malignant B-cells in vivo, such as rodent, canine or primate B-cells. The  
CC anti-CD22 antibody is claimed useful for detecting CD22 protein in a  
CC sample or in vivo in a mammal, and can be used in diagnostic kits  
XX  
SQ Sequence 123 AA;

Query Match 99.4%; Score 644; DB 2; Length 123;  
Best Local Similarity 99.2%; Pred. No. 4.3e-52;  
Matches 122; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 EVQLVESGGGLVKPGGSLKLSCAAASGFAFSIYDMSWVRQTPEKRLEWVAYISSGGTTYY 60  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 1 EVQLVESGGGLVKPGGSLKLSCAAASGFAFSIYDMSWVRQTPEKRLEWVAYISSGGTTYY 60

Qy            61 PDTVKGRFTISRDNANKNTLYLQMSSLKSEDTAMYYCARHSGYGSSYGVLFAYWGQGTLVT 120  
              |||||||||||||||||||||||||||||||||||||||||||||||||||  
Db            61 PDTVKGRFTISRDNANKNTLYLQMSSLKSEDTAMYYCARHSGYGSSYGVLFAYWGQGTLVT 120

Qy            121 VSA 123  
              |||  
Db            121 TSA 123  
<!--EndFragment-->

<!--StartFragment-->RESULT 3  
AAW66098  
ID AAW66098 standard; protein; 107 AA.  
XX  
AC AAW66098;  
XX  
DT 10-DEC-1998 (first entry)  
XX  
DE anti-CD22 monoclonal antibody light chain variable region.  
XX  
KW anti-CD22 monoclonal antibody light chain variable region; VL;  
KW Pseudomonas exotoxin; variable heavy chain; VH; variable light chain;  
KW malignant B-cell; immunodiagnosis; RFB4 IgG.  
XX  
OS Mammalia.  
XX  
PN WO9841641-A1.  
XX  
PD 24-SEP-1998.  
XX  
PF 19-MAR-1998; 98WO-US005453.  
XX  
PR 20-MAR-1997; 97US-0041437P.  
XX  
PA (USSH ) US DEPT HEALTH & HUMAN SERVICES.  
XX  
PI Fitzgerald D, Pastan I, Mansfield E, Kreitman R;  
XX  
DR WPI; 1998-521227/44.  
DR N-PSDB; AAV07641.  
XX  
PT Recombinant anti-CD22 antibodies and immuno-conjugates - of antibodies  
PT linked to a therapeutic agent, e.g. Pseudomonas exotoxin or a label; for  
PT inhibiting malignant B-cells.  
XX  
PS Claim 6; Fig 1; 71pp; English.  
XX  
CC The invention claims for a recombinant immunoconjugate comprising of a  
CC therapeutic agent (e.g Pseudomonas exotoxin) or a detectable label  
CC peptide bonded to a recombinant anti-CD22 antibody (RFB4 IgG) having a  
CC variable heavy (VH; AAW66099) chain with a cysteine residue at amino acid  
CC 44 and the present variable light (VL) chain with a cysteine residue at  
CC amino acid 100. The immunoconjugate is claimed to inhibit the growth of  
CC malignant B-cells in vivo, such as rodent, canine or primate B-cells. The  
CC anti-CD22 antibody is claimed useful for detecting CD22 protein in a  
CC sample or in vivo in a mammal, and can be used in diagnostic kits  
XX  
SQ Sequence 107 AA;

Query Match 99.5%; Score 559; DB 2; Length 107;  
Best Local Similarity 99.1%; Pred. No. 7.4e-34;  
Matches 106; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 DIQMTQTSSLSASLGDRVТИSCRASQDISNYLNWYQQKPDGTVKLLIYYTSILHSGVPS 60  
Db 1 DIQMTQTSSLSASLGDRVТИSCRASQDISNYLNWYQQKPDGTVKLLIYYTSILHSGVPS 60  
Qy 61 KFSGSGSGTDYSLTISNLEQEDFATYFCQQGNTLPWTFGGGTKLEIK 107  
Db 61 RFSGSGSGTDYSLTISNLEQEDFATYFCQQGNTLPWTFGGGTKLEIK 107  
<!--EndFragment-->